PATENT COOPERATION TREATY

PCT

TRANSLATION INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 6095/93/71				FOR FURTHER ACT	ION	See Form PCT/IPEA/416			
International application No.			o.	International filing date (day/month/year)	Priority date (day/month/year)			
PCT	PCT/EP2004/013004			17.11.2004		20.11.2003			
H02	K13,	/10		onal classification and IPC					
KOL	EKT	JR GRO	OUP D.O.O	•					
1.	1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.								
2.	This F	REPORT co	nsists of a total of	6	sheets, including this cover sheet.				
3.	Thisr	eport is also	accompanied by A	NNEXES, comprising:					
	a. 🔰	(sent i	to the applicant and	to the International Burea	u) a total of	sheets, as follows:			
	sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).								
	sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental								
	Box. b. (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s))								
	, containing a sequence listing and/or tables								
	related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).								
4.	This r	eport contai	ns indications relati	ng to the following items:					
	\boxtimes	Box No. 1	Basis of the	report					
		Box No. 1	II Priority						
		Box No. 1	III Non-establi	shment of opinion with regard to novelty, inventive step and industrial applicability					
		Box No. 1	IV Lack of uni	of invention					
	\boxtimes	Box No.		tatement under Article 35(2 d explanations supporting s		elty, inventive step or industrial applicability;			
		Box No.	VI Certain doc	uments cited					
Box No. VII Certain defects in the international app				ects in the international app	olication				
	Box No. VIII Certain observations on the international application								
Date of	submiss	sion of the d	emand	Da	te of completion of th	nis report			
Name and mailing address of the IPEA/EP				Au	Authorized officer				
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Facsimile No.			Tel	ephone No.					

International application No.

PCT/EP2004/013004

Вох	No. I	Basis of the report						
1.		n regard to the language , this report is based on the internaticated under this item.	onal application in the language in	which it was filed, unless otherwise				
		This report is based on translations from the original languments which is the language of a translation furnished for the pur	-	,				
		international search (Rule 12.3 and 23.1(b))						
		publication of the international application (Rule 12.	4)					
		international preliminary examination (Rule 55.2 and						
2.	rece	n regard to the elements of the international application, thi iving Office in response to an invitation under Article 14 a report):						
		the international application as originally filed/furnished						
	\boxtimes	the description:						
		pages <u>1-17</u>		as originally filed/furnished				
		pages*	received by this Authority on					
		pages*	received by this Authority on					
	\boxtimes	the claims:						
		nos.		as originally filed/furnished				
		nos.*	as amended (together					
		nos.* 1-22	received by this Authority on	01.06.2005 with letter of 01.06.2005				
		nos.*	received by this Authority on					
	\boxtimes	the drawings:						
		sheets _ 1/5-5/5		as originally filed/furnished				
		sheets*	received by this Authority on _					
		sheets*	_ received by this Authority on _					
		a sequence listing and/or any related table(s) – see Suppler	mental Box Relating to Sequence L	isting.				
3.		The amendments have resulted in the cancellation of:						
		the description, pages						
		the claims, nos.						
		the drawings cheets/figs						
		the sequence listing (specify):						
		any table(s) related to sequence listing (specify):						
4.		This report has been established as if (some of) the amenthey have been considered to go beyond the disclosure as the stable of the considered to go beyond the disclosure as the stable of the stable						
		the description, pages						
		the claims, nos.						
		the drawings, sheets/figs	the drawings, sheets/figs					
		the sequence listing (specify):						
		any table(s) related to sequence listing (specify):						
*	If ite	em 4 applies, some or all of those sheets may be marked "su	perseded."					

International application No.
PCT/EP2004/013004

Box		Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement				
1.	Statement					
	Novelty (N)	Claims	1-22	YES		
		Claims		NO		
	Inventive step (IS)	Claims	1-22	YES		
		Claims		NO		
	Industrial applicability (L	A) Claims	1-22	YES		
		Claims		NO		

2. Citations and explanations (Rule 70.7)

This report makes reference to the following document:

- D1: PATENT ABSTRACTS OF JAPAN, Vol. 1997, No. 06, 30

 June 1997 (1997-06-30) & JP 09 051659 A (ASMO CO

 LTD), 18 February 1997 (1997-02-18)
- 1. Document D1 is regarded as the prior art closest to the subject matter of claim 1.

Document D1 discloses in figure 5(c), in connection with figure 2, a commutator for an electric machine, the commutator comprising a support (3) produced from an insulating moulded compound, a plurality of metallic conductor segments (2) uniformly arranged on the support, around the commutator axis, with connection elements arranged thereon for a rotor winding (see figure 2), as well as an anti-interference device (6) to which the conductor segments (2) are connected in an electroconducting manner. The anti-interference device comprises a number of individual anti-interference elements (6) which corresponds to the number of conductor segments, the anti-interference elements (6) being arranged around the commutator axis, and the same number

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

of contact bridges (7a), each contact bridge interconnecting two adjacent anti-interference elements (6) in an electroconducting manner (see paragraphs [0019] and [0022]).

Each of the contact bridges (7a) comprises two branches (71a) connected with the two associated anti-interference elements (6) in an electroconducting manner. Since the contact bridges are designed as springs (see abstract, "resilient body") the branches naturally yield towards one another in the circumferential direction. Moreover, the branches are oriented (radially) "inwards" in relation to part (5).

The contact bridges (7a) comprise a base section (72a) connected with the associated conductor segment in an electroconducting manner. The base section is oriented outwards in relation to the conductor segments (i.e. the base section is located radially outside of the support).

The subject matter of claim 1 differs from the commutator described in D1 only in that the contact bridges are welded or glued in the area of their branches to the associated anti-interference elements and in the area of their base section to the associated conductor segments.

The technical effect of this feature is a more robust commutator.

This feature is known per se, but would not be considered by a person skilled in the art proceeding from D1 because it goes against the general teaching of D1 (see D1,

International application No.
PCT/EP2004/013004

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

paragraph [0008]).

The subject matter of claim 1 of the present application therefore involves an inventive step (PCT Article 33(3)).

2. The subject matter of claim 18 of the present application also involves an inventive step (PCT Article 33(3)) because this process claim includes all the corresponding features of claim 1.

International application No.
PCT/EP2004/013004

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

- 1. The terms "inwards" and "outwards" are unclear because no reference is given for interpreting their meaning ("inwards" or "outwards" of what?). Claim 12 is thus unclear (PCT Article 6).
- 2. This lack of clarity is even more important because the corresponding technical feature is supposed to be at the origin of the technical effect of the invention, i.e. the small size of the commutator.